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PACIFIC REBALANCE: TACTICAL IMPLICATIONS

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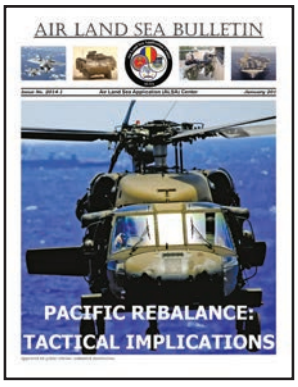


A US Army UH-60 Black Hawk helicopter assigned to the 25th Combat Aviation Brigade, 25th Infantry Division, comes in for a landing on the back of the USNS Guadalupe (T-AO 200), a U.S. Navy underway replenishment oiler, during deck landing qualification in the Pacific Ocean, 15 July 2013. (US Army photo by Capt. Richard Barker)

DIRECTOR'S COMMENTS

For almost 40 years, the Air Land Sea Application (ALSA) Center has adapted to changing operational environments to provide tactical solutions to meet the immediate needs of the warfighter.

As we hit the ground running in 2014, there are many challenges that lay ahead from operational drawdowns to force shaping and budget constraints. Though the challenges are great, in each of them exists an opportunity to make lasting, positive change by leveraging all we have learned as a joint force to further develop the capabilities we need for the future. In a constrained environment, many of our solutions will not be material, but will come through tactical innovations developed by our warfighters and coalition partners. ALSA, therefore, needs your continued expertise. It is primarily your inputs and direct engagement with the field that identify tactical gaps in doctrine. And it is you, the warfighter, that help us develop joint interoperability solutions in the form of multi-Service tactics, techniques, and procedures.

In that spirit of innovation, this issue of the Air Land Sea Bulletin (ALSB) examines the tactical implications of the strategic rebalance to the Asia-Pacific region. This shift is not a just an air and sea power area of concern. It has major impacts to all components including land. The first article, "A Natural and Deliberate Evolution," comes from the Air-Sea Battle (ASB) Office. It sets the stage by providing an overview of rebalancing efforts from the ASB Concept and is coauthored by Col Bob Valin (USAF), CAPT Phil Dupree (USN), COL Jack Goetz (USA), and Col Chip McLean (USMC). The ASB goal is to develop joint force capabilities to meet the A2AD challenges of this changing environment.

The second article, "Pivot to Asia – Existing Capabilities in an Anti-access/Area Denial Conflict," by Maj Craig Ansel (USAF) of the 606th Air Control Squadron, explores how US forces will operate utilizing existing capabilities to enable the Joint Operational Access Concept.

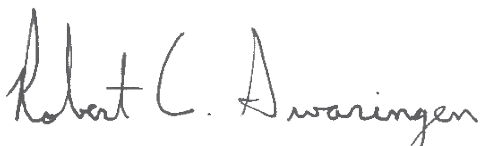
The third article is "Enabling PACOM OPLAN Validation Using Distributed Mission Operations," by Maj Richard "Ranger" Martino (USAF) of the 705th Combat Training Squadron. It explores how Distributed Mission Operations are uniquely suited to the vast space of the Pacific AOR to develop OPLANs, validate TTP, and adapt training to meet the changing adversary threat.

LTC Aaron Bazin (USA) of the Army Capabilities Integration Center delivers our fourth article, "The Army's Role in Countering Anti-Access and Area Denial: Support to Air-Sea Battle." He explains the importance of landpower in the ASB Concept and its vital role in rapidly reestablishing control of geostrategic points within the global commons.

The fifth article, "Army Strategic Capabilities Center in the Pacific," by COL J. Dave Price (USA), Director, Strategic Capabilities Center, emphasizes the significance of posturing to meet emerging responsibilities in cyber and space domains to support unified land operations and joint ground component equities.

Finally, CPT Nathan Herrick (USA) of the 25th Combat Aviation Brigade provides our sixth article, "Army Aviation takes to the Sea." He discusses how Army aviation will support PACOM operations and the challenges associated with this vast geographic area.

As we continue to tackle the challenges ahead, now more than ever, we need your participation in our joint working groups (JWGs) and future ALSBs. It is your opportunity to not only share your expertise, but also fulfill your duty as a warfighter to enhance our combat capabilities. For a list of upcoming 2014 JWGs and future ALSB topics, go to **http://www.alsa.mil**. Get involved and get your voice heard.



ROBERT C. SWARINGEN, Colonel, USAF
Director

A NATURAL AND DELIBERATE EVOLUTION: THE AIR-SEA BATTLE CONCEPT

By: Col Bob Valin, USAF; CAPT Phil Dupree, USN; COL Jack Goetz, USA; Col Chip McLean, USMC

"The Air-Sea Battle Concept is an important initiative that will help determine how the joint force will gain and maintain access in future military operating environments."

-Rep. Randy Forbes (R, VA), Chairman, House Subcommittee on Seapower and Projection Forces, October 2013[1]

From its inception, the United States (US) military has continuously adapted itself to meet evolving threats.

From its inception, the United States (US) military has continuously adapted itself to meet evolving threats. The threat environment continues to change and the Services and Joint Staff are responding. The proliferation of anti-access (A2)/area denial (AD) capabilities by potential adversaries challenge our ability to project power in the manner to which we have become accustomed for the past six decades.[2] Development of the Air-Sea Battle (ASB) Concept, stand-up of the multi-Service ASB Office, and initial actions to implement the concept are among the first steps undertaken by the Department of Defense to adapt to this changing environment.

Implementation of the ASB concept is intended to help develop joint force capabilities that provide military and political decision makers with the widest possible range of options to meet the 2012 strategic guidance outlined in the Secretary of Defense's Sustaining US Global Leadership: Priorities for 21st Century Defense. This guidance specifically tasks the US military to achieve and maintain the capacity to project power in the face of A2/AD challenges.

OPERATING ENVIRONMENT

A2/AD capabilities and strategies are not new. The objectives to deny an adversary access to and the ability to maneuver within a specific area remain timeless precepts of warfare. What is different now is that technological advances and proliferation of A2/AD capabilities threaten stability by empowering potential adversaries with previously unattainable long-range, precision weapon systems. Newer generations of cruise and ballistic missiles with improved range, accuracy, and lethality are being produced and proliferated. Highly capable

submarines and fighter aircraft are entering the militaries of many nations, while sea mines are being equipped with mobility, autonomy, and the ability to discriminate. Space and cyberspace are increasingly important to world commerce and friendly military operations and are more and more contested. Advances in computer and information technology are creating means and opportunity for computer network attack by state and non-state actors. The space domain is now vital to conducting operations as modern militaries have become dependent on space-based assets to communicate, survey, and navigate. Even low-tech capabilities, such as rudimentary sea mines, fast-attack small craft, or short range artillery and missile systems can render transit of the commons vulnerable to interdiction by coercive, aggressive actors, restricting free movement essential to our increasingly globalized society. The range and scale of possible effects from these capabilities present a military problem set that threatens the US and allied freedom of maneuver in the global commons.

We cannot take for granted the arguably uncontested freedom of action in the air, sea, space, and cyber domains that the US has enjoyed for more than a generation. Adversaries will actively oppose deployment and sustainment of our joint forces.

THE ASB CONCEPT

In 2009, Defense Secretary Robert M. Gates, directed the Departments of the Navy and the Air Force to develop a new operational concept named ASB to respond to these challenges. In the fall of 2012, the Vice Chiefs of all four Services signed a memorandum of understanding to implement the ASB Concept, thus codifying this multi-Service force development effort.

The objective of the ASB Concept is to develop the networked and integrated forces necessary to address evolving threats to access. The ASB Concept reflects an understanding of these threats and provides a set of classified tactical initiatives describing symmetrical and asymmetrical methods to counter and shape A2/AD environments. Also, it establishes ten Mission Focus Areas for the Services to work together to develop an integrated and interoperable force with the necessary characteristics and capabilities to succeed in such environments. ASB is a supporting pillar of the Chairman's Joint Operational Access Concept and provides a detailed view of the technological advances that complicate the A2/AD challenge in the global commons.

ASB relies on three main lines of effort: to disrupt enemy C4ISR[3] , destroy weapons launchers, and defeat enemy weapons. Specifically, ASB envisions disrupting enemy command and control to enable sufficient temporary access to areas where we need to operate, then destroying enemy platforms to reduce the density of adversary attacks, and defeating any sophisticated weapons that are launched against us.

At its core, ASB seeks a "pre-integrated" joint force with habitual relationships and possesses networked and integrated cross-domain capabilities. Also, this force must retain the flexibility to adapt or develop new tactics, techniques, and procedures, as situations dictate. Such a force can provide the strategic deterrence, assurance, and stabilizing effects of a "force in being," and also be operationally useful at the outset of hostilities without delays for buildups and extensive mission rehearsal. Moreover, it will help ensure a joint force commander has a full range of options when facing an adversary with A2/AD capabilities.

At its core, ASB seeks a "pre-integrated" joint force with habitual relationships and possesses networked and integrated cross-domain capabilities.

IMPLEMENTATION

Former Secretary of Defense Leon Panetta endorsed the ASB Concept as a necessary first step to address the A2/AD challenge and directed the Services to further develop the concept. To this end, the Services established a governance structure consisting of a flag-level ASB Executive Committee that convenes on a quarterly basis; a

senior steering group that convenes monthly; and the ASB Office support staff comprised of approximately 15 personnel from each of the four Services. These staff members were sourced from existing military positions and have the mission to foster the development and adoption of the related DOTMLPF[4] solutions based upon the ASB's conceptual design.

The ASB Office advocates for ASB initiatives, monitors their progress, and coordinates with various stakeholders within each Service.

The ASB Office advocates for ASB initiatives, monitors their progress, and coordinates with various stakeholders within each Service. Using dedicated Service processes, the ASB Office established subject matter expert working groups and held implementation workshops to validate, refine, and expand the original concept, and lay out a plan for joint and Service implementation. This plan (now in its second iteration) describes the recommended processes and actions necessary, during a multi-year window, to develop forces and enhance the military capabilities necessary to counter current and future A2/AD challenges. Accordingly, implementation of ASB is expected to be a many-year process, as the Services strengthen and enhance their habitual relationships, and more closely integrate their Title 10 [US Code], "organize, train, and equip," activities.

The ASB implementation effort provides a prism through which the Services can better understand and focus actions addressing the challenges posed by a robust A2/AD threat. It is important to note that the solutions considered include changes to doctrine, organization, training, leadership, personnel, facilities, and materiel solutions.

While still in its fledgling stages, this force development effort provides a complementary perspective to overall analyses done by the Services. This additional perspective enhances both warfighter planning and individual service viewpoints, while it also encourages increased inter-service collaboration, and provides integrated priorities to Service resource sponsors and programmers for use in their established deliberations.

THE IMPORTANCE OF ASB

Perhaps the best way to understand the value of the ASB concept is to imagine a scenario in which the US and its allies lack sufficiently networked and integrated forces required to operate in highly contested A2/AD threat environments.

With US forces unable to secure freedom of action in the global commons, potential aggressors with advanced A2/AD capabilities could restrict or close international airspace and vital sea lanes at will. Joint forces attempting to intervene would face robust anti-access threats and be required to operate at far greater peril. As a result, US and allied forces may not be able to prevent the undermining of the interconnected international systems of finance, trade, security, and law enabled by access to the global commons. The loss of a secure global commons would weaken alliances, partnerships, and the rule of law, and could force other nations to accommodate regional hegemons, undermining global stability. In these potential future scenarios, the capabilities of fielded joint forces are enabled by implementing ASB, because without freedom of action in the global commons, the joint force is challenged to deploy, conduct operations, or be sustained. In an ever-changing world that relies on continued US leadership, concepts such as ASB are essential to sustaining America's ability to project power.

CONCLUSION

Successful future operations against advanced A2/AD threats will require unprecedented levels of joint and combined integration founded on comprehensive and habitual relationships that span from fleets and forces in the field to their operational headquarters and the Pentagon. Substantial aspects of joint force development, operations, training, acquisition, and modernization will be involved to meet

the challenge. Given the proliferation of advanced A2/AD technologies, ASB-based solutions will be a necessary component for the US military's ability to continue to confidently operate forward and project power globally. The ASB Concept is a natural evolution of the joint force toward more networked, integrated, and interoperable operational solutions.

Ultimate realization of the ASB Concept will include interoperable air, naval, land, space, and cyber forces that can execute networked, integrated attacks-in-depth to disrupt, destroy, and defeat the threat of an adversary's A2/AD capabilities. This capability will, in turn, sustain the ability of joint forces to project military power, wherever and whenever needed, to help counter potential aggression or hostile actions against US and allied interests.

END NOTES

[1] Quote taken from the opening statement of Rep. Randy Forbes (R,VA), 10 Oct 2013, House Armed Services Subcommittee on Seapower and Projection Forces Hearing on Air and Sea Battle Strategy, Governance, and Policy.

[2] Anti-access (A2) denotes any action that aims to slow deployment of friendly forces into a theater, or causes forces to operate from distances farther from the locus of conflict than they would otherwise prefer. *A2* affects movement to a theater. Area denial (AD) denotes any action intended to impede friendly operations within areas where an adversary cannot or will not prevent access. AD affects maneuver within a theater.

[3] Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance

[4] The familiar components of the 'DOTMLPF' construct are: doctrine, organization, training, materiel, leadership and education, personnel, and facilities.

The authors are the respective Service leads for the multi-service Air-Sea Battle Office (ASBO) in the Pentagon.

The USS Arleigh Burke-class guided-missile destroyer, USS Paul Hamilton (DDG-60), launches a standard missile (SM 2) during a missile exercise 13 July 2012. The Paul Hamilton participated in Rim of the Pacific Exercise 2012. (Photo by MCS3 Raul Moreno Jr., US Navy)

PIVOT TO ASIA – EXISTING CAPABILITIES IN AN ANTI-ACCESS/AREA DENIAL (A2AD) CONFLICT

The Combined Air and Space Operations Center (at an undisclosed location) commands and controls the broad spectrum of what air power brings to the fight: global vigilance, global reach and global power. This photo was taken 10 Oct 2008. (Photo by USAF Central Command Public Affairs)

By Maj Craig Ansel, USAF

OVERVIEW

In 2011, President Barack Obama announced that the United States (US) would "Pivot to Asia," which would result in a rebalancing of US strategic focus to the Asia/Pacific region after years of preoccupation with the Middle East. The military dimension of this shift includes a new operational concept, Air-Sea Battle (ASB), with an emphasis on defeating A2AD strategies of potential future adversaries. How US forces will operate in response to A2AD challenges is broadly laid out in the Joint Operational Access Concept (JOAC) which defines general principals of employment and required capabilities for the future force. However, the JOAC makes several assumptions about the availability of future capabilities that will need to be revisited given the current budget climate. In light of reduced budgets and uncertainty over future acquisitions, it is prudent to look at how existing systems can enable the JOAC. An effective counter A2AD strategy will have to concentrate on capabilities rather than the systems that provide those capabilities. Furthermore, an analysis of specific platforms will provide clarity on what capabilities required by the JOAC are resident in the force today. One existing system that can be adapted to the JOAC is the E-8C Joint Surveillance Target Attack Radar System (JSTARS).

An effective counter A2AD strategy will have to concentrate on capabilities rather than the systems that provide those capabilities.

The goal of this article is not to advocate for a specific platform but rather to demonstrate how existing capabilities can be utilized to enable the JOAC.

JSTARS AND THE JOINT FUNCTIONS

The JSTARS is an Air Force command and control intelligence surveillance and reconnaissance (C2ISR) system. The primary mission of the JSTARS is to conduct battlefield surveillance for supported ground commanders and exercise command and control (C2) over assigned assets conducting a range of missions from airborne interdiction to personnel recovery. An emerging mission set for the system is maritime surveillance and C2 for airborne interdiction of maritime targets. Recent upgrades to the JSTARS have provided a greatly enhanced capability to conduct maritime surveillance over blue water (oceans and seas) in support of naval operations. The capabilities of the JSTARS weapons system align with a number of areas specified in the JOAC. The JOAC identifies several "implications for the performance of the various joint functions," specifically C2, intelligence, fires, movement and maneuver, protection, and sustainment. Of the six joint functions affected by the JOAC, JSTARS has the capability to provide enhancement and mitigate risk across five: C2, intelligence, fires, movement and maneuver, and protection.

C2

As stated in the JOAC, "This concept will put a heavy burden on C2. The C2 system must support forces operating at global distances, deploying and maneuvering independently on multiples lines of operations from multiple points of origin, and concentrating fluidly as required... this concept envisions decentralized C2 to the extent possible in both planning and execution." A key requirement for defeating A2AD capabilities is the rapid coordination of forces across multiple domains necessitating robust C2 at the tactical level. JSTARS is well suited to perform the C2 role in a fluid and decentralized environment. JSTARS possesses a robust communications system for line-of-sight communication with tactical assets, beyond line-of-sight communication for reach-back with higher echelons of C2, and tactical data-link capability with joint and coalition partners. Additionally, a standard JSTARS crew complement consists of Air Force battle management, intelligence, and surveillance professionals in addition to Army personnel. The combined capabilities of the systems and personnel were dramatically displayed in operations which supported the recent Libyan uprising. JSTARS crews drastically reduced the time required to execute time sensitive targeting against fleeting targets of opportunity. The ability to rapidly disseminate tasking information will be vital in an A2AD environment where strike aircraft lack the luxury of loitering in target areas. Furthermore, enemy A2AD operations will likely result in a degraded communications environment where electronic countermeasures and counter-space operations may deny reliable communication with headquarters units. In these situations, JSTARS crews possess the required training, experience, and on-board oversight to conduct decentralized C2 operations in accordance with the commander's intent.

INTELLIGENCE

The JOAC recognizes that "the reconnaissance and surveillance contest is critical to access operations." JSTARS is capable of simultaneously conducting surveillance of tens of thousands of square kilometers. JSTARS can perform this wide area surveillance over maritime and terrestrial domains, individually or at the same time. However, collecting data is insufficient. JSTARS crewmembers are able to disseminate collected ISR information in near real time (NRT) to aircraft, ships, and ground agencies. Information collected can be distributed directly to strike aircraft, ground units, and ships for immediate action or to higher headquarters units for analysis with only seconds of delay. The ability to produce and disseminate a coherent picture of ground and surface movement will speed the decision making process and expedite the application of lethal and non-lethal effects on fleeting or high value targets.

JSTARS is well suited to perform the C2 role in a fluid and decentralized environment.

FIRES

The application of fires in an A2AD environment also possesses specific challenges. "Target acquisition must be rapid and accurate, and procedures must

be developed to minimize the latency or delay between identification and engagement of potentially fleeting critical targets." JSTARS is a C2 platform capable of detecting and tracking its own targets for prosecution. Additionally, effective decentralized operations will be essential in producing what the JOAC refers to as "cross-domain synergy: the complementary vice merely additive employment of capabilities in different domains." "Embracing cross-domain synergy at increasingly lower levels will be essential to generating the tempo that is often critical to exploiting fleeting local opportunities for disrupting the enemy system." In an environment requiring decentralized execution, JSTARS surveillance personnel can detect potential targets. Onboard intelligence officers and technicians can cross queue with other intelligence, surveillance, and reconnaissance systems for identification while battle managers prioritize engagements in accordance with the commander's intent and, consequently, prosecute targets. While Army personnel traditionally fly onboard JSTARS, the capability exists to rapidly integrate the Navy and amphibious liaison element (NALE), Marine liaison officers (MARLOs), and special operation liaison element (SOLE). NALEs, MARLOs and SOLEs have flown aboard JSTARS to facilitate cross-domain synergy.

The JSTARS radar sub-system provides the platform the capability to perform ISR functions at standoffs of hundreds of kilometers from the AOI.

MOVEMENT AND MANEUVER

Movement and maneuver in an A2AD environment will provide very different challenges from the permissive environments of Iraq and Afghanistan. High value assets may be stationed at significant distances from the area of interest (AOI) for force protection. According to the JOAC, "Some portion of the joint force will be able to maneuver directly against key objectives from ports of embarkation without reliance on fixed intermediate or forward bases, identifying and changing objectives en route. This will put a premium on en route communications for C2." The beyond-line-of-sight communications capability of JSTARS will assist assets transiting into theatre with building an accurate threat picture based on the most current data available and providing updates to any tasking changes en route. The ability to receive tasking changes en route will reduce the time assets will be forced to remain in the A2AD environment and offers the chance to dynamically redirect aircraft to take advantage of fleeting targets of opportunity.

PROTECTION

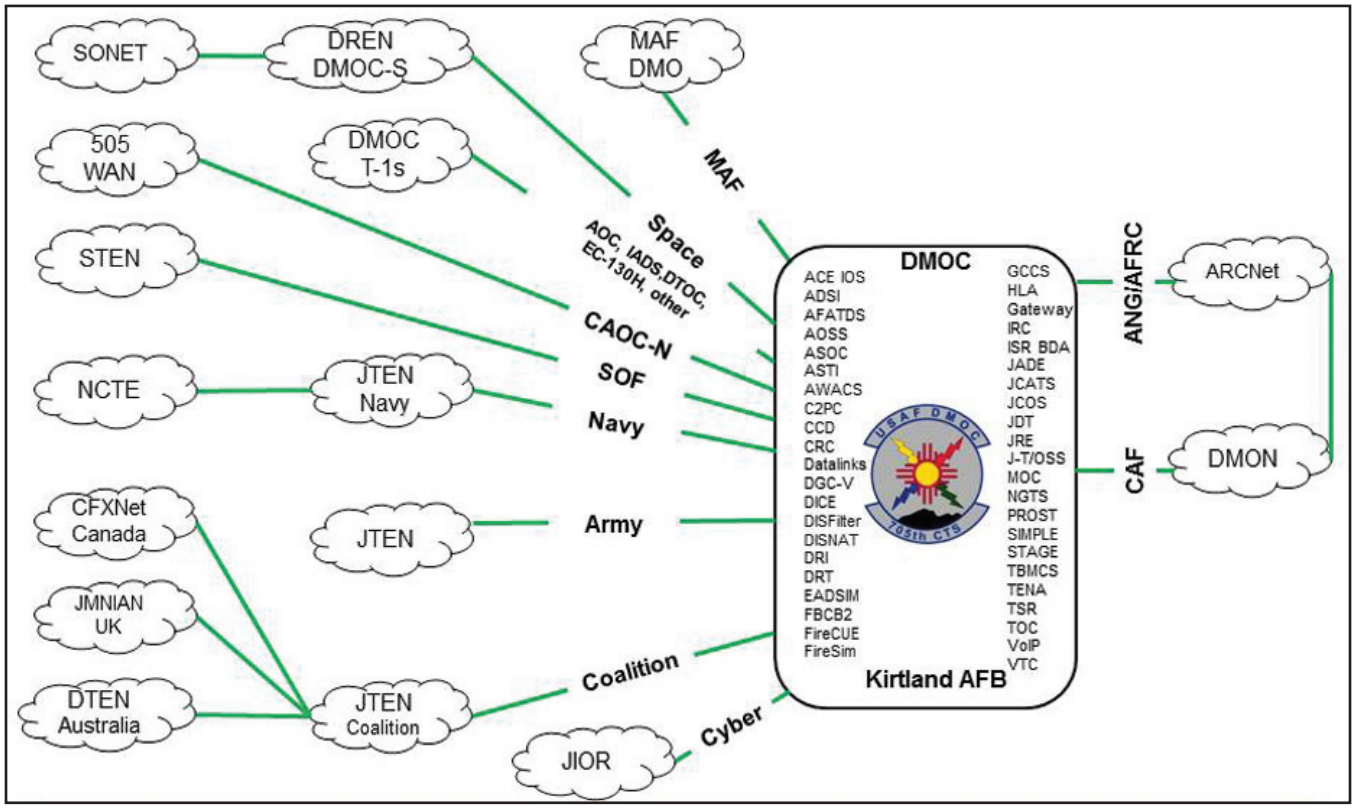
Protection is of vital importance while conducting counter A2AD operations. The JOAC indicates, "protecting joint force C2 will demand special emphasis because this is a critical function against which many enemies will concentrate their targeting." The JSTARS radar sub-system provides the platform the capability to perform ISR functions at standoffs of hundreds of kilometers from the AOI. The standoff capability inherent in radar systems allows the JSTARS to avoid entering the threat ranges of most surface-to-air missile (SAM) systems while performing its mission. Additionally, while not placing the platform out of range of hostile fighter aircraft, the standoff from the AOI allows JSTARS to operate behind friendly air to air capable assets or within the protective envelop of Army and Navy SAMs. JSTARS standoff capability will enable crews to conduct C2 and ISR missions from a defensible position.

CONCLUSION

To accomplish the President's strategic direction of a "Pivot to Asia" we must prepare for the possibility of conflict with a near-peer competitor. JSTARS is merely one platform capable of providing some of the many capabilities needed to execute a successful counter A2AD strategy. A comprehensive review of existing systems should be conducted to determine where the Services stand today in their ability to provide capability for the potential future fight. By examining how the existing systems from each Service can contribute to the emerging ASB Concept, the Department of Defense can better allocate limited available resources to resolve shortfalls that no existing system can fill.

Maj Craig Ansel is the Assistant Director of Operations for the 606th Air Control Squadron at Spangdahlem Air Base, Germany.

ENABLING USPACOM OPLAN VALIDATION USING DISTRIBUTED MISSION OPERATIONS



DMOC Connectivity

By Maj Richard "Ranger" Martino, USAF

"The US has allies, interests, and responsibilities across the globe. The Asia-Pacific rebalance is not a retreat from other regions of the world."

-Secretary of Defense Chuck Hagel

Distributed mission operations (DMO) provide combatant commanders venues to enhance warfighter readiness and prepare forces to execute on-the-shelf operational plans (OPLANs) without leaving their home station. Current capabilities allow distributed training at multiple mission training centers synched in the same virtual battlespace. Virtual Flag, as a Joint National Training Capability certified accredited event, provides warfighters a unique opportunity to move from small to medium scale large force employment, into a major combat operations event based on United States (US) Pacific Command (USPACOM) OPLANs with only minor changes to accommodate simulator limitations.

Few opportunities exist for warfighters to fully integrate multiple mission areas like theater air control system, offensive counter air, air operations in maritime surface warfare, operational to tactical intelligence activities, and special operations (to name a few). Funding constraints, reduced access to airspace, and crew availability require a continued look at DMO to meet full spectrum air, space, cyber, land, and sea combat readiness requirements.

As the joint team looks more at the USPACOM area of responsibility (AOR), DMO is uniquely suited to incorporate the vast battlespace of the Pacific AOR, develop OPLANs, validate tactics, techniques, and

Current capabilities allow distributed training at multiple mission training centers synched in the same virtual battlespace.

procedures (TTP), and adjust to the changing adversary threat. Virtual Flag, as one of several DMO training venues, can integrate emerging air-sea battle TTP, drive anti-access/ area denial desired learning objectives (DLOs), and provide a near-peer competitor in concurrent mission sets.

As part of the process, technical subject matter experts determine the availability of the correct terrain data bases and threat models for the required mission sets.

Distributed training centers, such as the Navy Warfare Development Command (NWDC), Norfolk, Virginia; Combat Air Forces Distributed Training Center (CAF DTC), Joint Base Langley-Eustis, Virginia; Distributed Training Operations Center (DTOC), Des Moines, Iowa; Distributed Mission Operations Center – Space (DMOC-Space), Schriever Air Force Base (AFB), Colorado; and DMOC, Kirtland AFB, New Mexico can provide live-virtual-constructive training for warfighters through DMO. Improved fidelity of virtual and constructive models, coupled with advances in environment generators, provides the joint force the ability to leverage DMO in current and emerging mission sets to significantly increase warfighter readiness through improved OPLAN familiarization and training, testing, and tactics development.

Virtual Flag preparation starts with an exercise planning conference (EPC) held at the 705th Combat Training Squadron, Kirtland AFB. Participants who cannot travel dial-in via video teleconference (VTC) or Adobe Connect Pro. This capability allows USPACOM participants to plan from their home station while working directly with units around the world that will support a USPACOM OPLAN Virtual Flag, thus reducing travel costs. To improve access to mission planning documents, the DMOC creates Secure Internet Protocol Router (SIPR) and Non-classified Internet Protocol Router (NIPR) websites to allow access to current documents.

During the EPC, USPACOM and component planners can provide the DMOC team and participating units the OPLAN and desired mission areas that require emphasis, as well as understand the participating units' desired learning objectives, which formulates how the scenario will be built. As part of the process, technical subject matter experts determine the availability of the correct terrain data bases and threat models for the required mission sets. For example, units conducting air-to-air training do not require the same ground fidelity as A-10 and joint terminal attack controllers conducting close air support. Air-to-air players are primarily concerned with air-to-air threat representations (e.g., red air, integrated air defense system laydown, etc.), while air-to-ground players require high-fidelity terrain and target models (e.g., tanks, buildings, etc.). For air-to-air, "blue sky and brown earth" suffices for the model providing the visuals of the aircraft to enable formation flying and visual identification. For command and control (C2) units such as the E-2, E-3, US Marine Corps (USMC) tactical air operations center (TAOC), and US Air Force control and reporting center (CRC), an accurate representation of the air picture (i.e., dots on the scope) is sufficient for fidelity.

As the scenario is developed based on the OPLAN and warfighter DLOs, intelligence planners analyze the threat country to develop the "red air, ground and surface" order of battle. The balance is providing an accurate representation of the threat with the training requirements of the participants. Likewise, allowing the combined air operations center (CAOC) to develop a time-sensitive target to pass to an Airborne Warning and Control System (AWACS), which will pass it to a virtual B-52 crew, requires planners to understand the training needs of all participants in the kill chain.

"White cards"(inputs directly to the participants from the exercise staff) to the CAOC do not always allow the combat operations division team the opportunity to fully exercise their processes, but having a virtual B-52 crew burn "virtual JP-8" wastes valuable simulator time. The use of constructive entities (normally controlled by an operator-in-the-loop white force at the DMOC, CAF DTC, NWDC, etc) enables the CAOC process to continue while the B-52 crew works with other TTP for mission sets they are required to train.

During execution, the DMOC leverages subject matter experts (SMEs) from across the Services to fulfill white force duties at Kirtland AFB. This enables warfighters to have man-in-the-loop constructive "players" that react as if they were actually manning simulators in a virtual mission training center. The only difference is they are "driving" their aircraft from an environment generator. This professional white force also provides the "fill-in" mission aircraft and crews that are not virtual participants. For example, since mobility air force (MAF) tankers are currently not DMO capable, the white force "drives" tankers and aircraft for rendezvous providing C2 an opportunity to train to tanker management while also providing realistic problem sets for managing defensive counter air orbits and adjusting combat air patrol locations to adjust to the adversary.

A professional red force complements the white force and warfighter training. This "thinking" adversary is usually controlled by a professional aggressor pilot and controller from the 57th Adversary Tactics Group at Nellis AFB, Nevada. The tools provided to RED 1 include positioning red air combat air patrol (CAP) locations, contested, degraded, and operationally limited tools such as a data-link jammer, communications jamming, Internet relay chat intrusion and denial, and an opportunity to punish blue mistakes (such as not providing defensive counterair forward of a close air support (CAS) location).

Finally, none of this is possible without the technical integration of multiple simulators and environment generators. Most of these simulators were never designed to be on a DMO network or be connected to simulators operating different software. The DMOC's "Maytag" section (call sign of the technical integrators) ensures the multiple sites across the world are interoperable; maintain connectivity, and when adverse situations arise, engineers and DMO SMEs work to resolve the issue to enable continued training of the warfighters.

As live-fly opportunities decrease, USPACOM planners should consider Virtual Flag and other DMO events to complement other training (e.g., table top, rehearsal of concept drills, live-fly, etc.). Small to medium scale DMO events are well covered through venues like the NWDC, CAF DTC and DTOC. Using these venues to work on a single mission set allows warfighters to hone TTP and enhance aircrew upgrades. The power of Virtual Flag enables warfighter integration opportunities across Services (and countries) involving multiple concurrent mission sets in the same or adjacent virtual battlespace. For example, CAS, C2, air operations in maritime surface warfare (AOMSW), interdiction, space, special operations forces, airlift, and defensive counterair (DCA) were conducted in each three-hour vulnerability period during a recent coalition Virtual Flag. C2 crews were represented by Australian E-7 Wedgetail, United Kingdom's E-3D and R-7 Sentinel (using the DMOCs Virtual Joint Surveillance and Target Attack Radar System simulator), USMC's TAOC, US Navy E-2C Hawkeye, and US Air Force E-3 AWACS.

This "thinking" adversary is usually controlled by a professional aggressor pilot and controller from the 57th Adversary Tactics Group at Nellis AFB, Nevada.

The OA team watches the mission unfold in real-time and gathers debriefing focus points for the warfighters.

Also, Virtual Flag is well suited to tackle operational- to tactical-level C2 seams as a result of the expansive battlespace. Virtual participants can operate from multiple areas hundreds of miles apart and feed the same tactical to operational C2 nodes. The combination including tactical and operational battle management afforded by the DMOC and CAOC-Nellis (505th Test Squadron), provides the training audience an ability to go beyond basic tactical maneuvers by training participants to the cognitive decision environment. Testing the tactical and operational levels of war through the seams of phase transitions enables combatant command to test their theater plans and C2 architecture against a realistic adversary and adjust OPLANs as required.

Component planners can integrate with the Virtual Flag team to develop vignettes to validate all or portions of their OPLANs (to include special instructions, area air defense plan, airspace control plan, airspace control order, etc.) or experiment with new TTP or draft changes to existing plans. Early integration into the planning process allows the DMOC team to develop the scenario and provide USPACOM requirements to the warfighters during the EPC. During execution, USPACOM representatives should work with the DMOC's exercise director to stress targeted mission vignettes, or based on immediate feedback and identified debrief issues, work to adjust the scenario for the next day to continue to validate mission threads.

Also available to the USPACOM is a professional operational assessment (OA) team at the DMOC. The OA team watches the mission unfold in real-time and gathers debriefing focus points for the warfighters. This reduces the debrief time of the crews and allows the crews to focus on specific issues during execution. The OA cell at the DMOC also can be used to evaluate actual multi-Service tactics, techniques, and procedures (MTTP) to determine if MTTP are being adhered to or if the current MTTP was not executable.

After execution, warfighters can provide direct feedback to USPACOM and component planners. This includes recommendations to improve current planning documents and identifying areas of continued training or TTP development. The value of providing USPACOM specific training requirements enhances unit training because participants can identify to their unit mission areas USPACOM identified as critical.

DMO provides realistic training across the range of military operations. USPACOM planners and warfighters in theater or tasked to support USPACOM OPLANS have a unique opportunity to leverage DMO capabilities and improve warfighter readiness. Properly leveraging Virtual Flag complements existing live-fly training and other DMO venues enabling a more comprehensive joint training venue.

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THE ARMY'S ROLE IN COUNTERING ANTI-ACCESS AND AREA DENIAL: SUPPORT TO AIR-SEA BATTLE

An unidentified soldier with 8th Special Troops Battalion, 8th Theater Sustainment Command is among others (in vehicles) who conduct a command post exercise 27 Feb 2012. The exercise, located at Makua Valley military reservation, Oahu, Hawaii, tests their ability to deploy to an austere environment and communicate with their main command post during a natural disaster in the Pacific area of operations. (Photo by Spc Tiffany Dusterhoft, USA)

By LTC Aaron Bazin, USA

"Since men live upon the land and not upon the sea, great issues between nations at war have always been decided— except in the rarest cases— either by what your army can do against your enemy's territory and national life or else by the fear of what the fleet makes it possible for your army to do."

-Sir Julian Stafford Corbett, 1911[1]

INTRODUCTION

The Air-Sea Battle (ASB) Concept is a key tenant of the joint operational access concept as the primary means of countering adversaries' anti-access (A2)/ area denial (AD) efforts, and at its core, focuses on countering threat A2 and the areas where it overlaps with threat AD with networked integrated attacks-in-depth to disrupt, destroy, and defeat an enemy force.[2] As demonstrated in over a decade of success in combat, the United States (US) Army has unique competencies that, if properly integrated, would assist the joint force before, during, or after any counter A2 of an AD mission. This article will discuss the conceptual question: What is the Army's role in countering A2 and AD?

LANDPOWER'S FUNDAMENTAL ROLE

Throughout history, from before the Peloponnesian Wars through today, nations have employed maritime and land forces in a mutually supporting manner to ensure continued access and the free flow of commerce. Global commons, areas outside the jurisdiction of any nation (including Antarctica), are of enduring interest to the US because they are the conduits for global commerce and vital to the projection of military power.[3] Adversaries have continually challenged the nation's access to the global commons and the US military has defended these threats through military action that often involves land forces. As technology

Adversaries have continually challenged the nation's access to the global commons and the US military has defended these threats through military action that often involves land forces.

has developed, additional operating domains have emerged to expand this military problem, and the global commons now includes the domains of air, space, and cyberspace. Important areas in the global commons are depicted in the following illustration.

DECISIVE POINTS IN THE GLOBAL COMMONS

At the strategic level, landpower has a critical role in the control of the global commons. The land, maritime, and air domains intersect at key geostrategic decisive points in the global landscape. Ninety-five percent of global trade passes through these points, including two-thirds of the world's petroleum.[4] These choke points present high payoff targets that state and non-state adversaries could exploit. Adversaries could contest the direct control of these key choke points in the future to interrupt sea lines of communication to affect the flow of global commerce and influence events on land. Landpower can seize key terrain that affects the global commons and provide continued access. This includes the ability to forcibly introduce and support light, medium, or heavy units and key enablers into chokepoints or densely populated areas in the littorals.

Landpower can seize key terrain that affects the global commons and provide continued access.

Along with these strategic chokepoints, there exist additional locations on land that are so vital to the free flow of global commerce that it is in the national interest to safeguard them. These locations include major root-name servers through which all internet traffic flows, pipelines and hubs for the transit of petroleum products and other natural resources, commercially important air and seaports, and land-based locations that support space operations. Landpower is essential to critical infrastructure protection on or near land. If an adversary seeks to exert control over one of these locations, landpower is the ultimate strategic tool to rapidly reestablish control and, if needed, facilitate repairs to restore vital services. Below is a brief outline of what the Army brings to the counter A2/AD fight.

INTEGRATION ACROSS JOINT OPERATIONAL PHASES

The Army prevents conflict by providing a credible land force that shapes the operational environment; deters potential adversaries; and, if required, fights and wins the nation's wars as part of the joint force. Through regional alignment, building partner capacity, combined training, and multinational exercises, Army forces foster strong military-to-military relationships to gain access and pre-position critical systems. However, the most valuable currency in gaining access to partners and allies are personal relationships.

Decisive Points in the Global Commons[5]

WHAT DOES THE ARMY BRING TO THE COUNTER A2 AND AD FIGHT?

- Protection. In the geostrategic landscape, there exists critical infrastructure nodes so vital to global commerce and sustained military advantage that it is in the national interest to protect them. The Army is equipped and uniquely suited to secure and protect land based, critical infrastructure through theater wide, integrated air and missile defense. Although Army systems have limitations, such as terminal accuracy and range, the Army can provide the integration of fires to the joint force, adding depth and control.
- People. Relationships take significant time and effort to cultivate and are critical to gaining and maintaining access to strategic partners. Army forces are able to form military-to-military partnerships through regional alignment, building partner capacity, combined training, and multinational exercises.
- Persistence. Army forces which are pre-deployed to strategically important locations offer a less-expensive[6] and longer-duration capability that can shape the battlefield for a decisive advantage. Army systems are extremely survivable which provides an asymmetric advantage and limits the options available to the enemy.
- Preparation of the Environment. Army special operations forces and intelligence capabilities are critical elements in shaping and influencing the operational environment before, during, or after any counter A2 or AD fight.
- Providing Theater Infrastructure. The Army has a fundamental role in establishing theater sustainment and mission command infrastructure to enable joint operations. This includes a robust deployable consequence management and engineering capability to assist partner nations in facilities repair and critical services restoration.
- Projection of Decisive Combat Power. The Army can conduct joint forcible entry operations into denied areas and sustain them for an enduring period thereby giving policymakers the ultimate military option, decisive land control.

Integration Across Joint Operational Phases

When operational conditions rapidly escalate, a commander cannot hope to surge trust; it must be there before shooting begins. The Army plays a crucial role in building relationships and setting the conditions for success.

The joint commander should fully integrate land-based air defense, fires, and special operations forces during force entry and while conducting ASB. As the ultimate form of control, Army airborne and air assault forces can conduct forcible entry giving the commander the ability to introduce maneuver forces quickly and undertake operations to seize the initiative, thus decisively altering the parameters of a conflict. The Army also can forcibly gain control of key locations and clear them of enemy systems, such as anti-aircraft and anti-ship missiles. Additionally, Army forces should be postured to exploit the access and maneuver forces forward to provide enduring strategic follow-through and staying power.

For nearly half of the 20th century, Army units provided coastal fires to deny threat forces access and control of the sea; however, the Army has not done this for decades.[7] To achieve the cross-domain synergy that ASB requires, the Army should consider reintroducing this capability to provide new value to the joint force. One of the most challenging operations that naval planners envision today is a contested transit of a strategic choke point. Through the employment of current Army systems in new ways (e.g., attack aviation, Patriot, Phalanx, Terminal High Altitude Area Defense (THAAD), tactical unmanned aerial vehicles, and High Mobility Artillery Rocket System (HIMARS)) and the development of new coastal defense capabilities (e.g., maritime autonomous target recognition for Army Tactical Missile System (ATACMS) and Guided Multiple Launch Rocket System (GMLRS), or boost-glide capability) a joint commander could gain a significant operational advantage.

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For example, if partner nations granted the requisite authorities, the right land-based coastal fires systems integrated with a maritime task force could quickly overcome the complex threat of swarming Iranian fast attack and interdiction craft. The Army component of this task force would act as a "strategic" support-by-fire position whereby land-based fires would provide direct support to naval maneuver and allow air and naval weapons platforms to focus elsewhere. Simply, for every ground-based asset employed, the joint commander gains operational persistence and increases his/her ability to dynamically take the fight to the enemy.

Following A2 and AD operations, Army forces can help establish or maintain a safe and secure environment and facilitate the restoration of order. Stability operations also can help establish political, legal, social, and economic institutions while supporting infrastructure repair and the transition to legitimate host nation governance. Without land forces prepared to address the "what's next," a successful counter A2 or AD operation could rapidly turn into a strategic failure.

Without land forces prepared to address the "what's next," a successful counter A2 or AD operation could rapidly turn into a strategic failure.

CONCLUSION

Control of the global commons is essential for commerce; freedom of navigation; secure access; movement of information; and, ultimately, the welfare of the nation. The Army's interest and intent in A2 and AD is not to compete with the US Marines who remain the nation's expeditionary force in readiness. Army forces must integrate seamlessly with the joint force and are essential to execution of any counter A2 or AD mission. In addition, the Army offers unique contributions by building relationships and providing critical enablers that complement the other services, fill gaps, and increase the operational flexibility for the joint force.

After hard-won success in the longest, and one of the most expensive, wars in America's history,[8] the Army is arguably better prepared today to meet the demands of this challenging context than ever before. However, to do so, the Army must prepare to employ the depth and breadth of its capabilities in new and unfamiliar ways and develop new capabilities that create options for policymakers. The future threat of adversaries challenging the US in the global commons is a real and harmful threat. The Army must integrate with the joint force more effectively and be in the right place at the right time to deliver the decisive punch of landpower whenever the nation calls.

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ARMY STRATEGIC CAPABILITIES CENTER IN THE PACIFIC

By COL J. Dave Price, USA

For a long time, the Army has been taking a containment approach in space and cyber domains, as if we were fighting the cold war. Now, we are approaching these domains asymmetrically and holistically. How does an Army Service component command (ASCC), like the United States Army Pacific (USARPAC), optimally posture to meet growing demands and emerging responsibilities in cyber and space domains that support unified land operations (ULO) and joint ground component equities? There is no cyber cavalry right over the hill coming to save the day and we need to avoid "Little Big Horn". We have to approach space and cyber domain challenges collectively because they are critically dependent on one another.

The Department of Defense and the Army have several proposals to man and operate in cyberspace; none of which provides new capacity immediately to the ASCC. While there are emerging, emergency, and expeditionary capabilities, many of these options will not fill current perceived voids in our organizations in cyber. Most estimates are that a fully trained and manned cyber electro-magnetic spectrum activities (CEMA) team with fully trained cyber, electronic warfare (EW), intelligence, and electromagnetic spectrum operators, and cyberspace in general, are 10–15 years behind where Army space support elements are today. Space, however, can help provide a technical and organizational framework to leverage cyberspace capabilities and activities at the ASCC, corps, and division levels.

While the space organizations are more mature and better prepared to support current and future operations in Army headquarters throughout ULO than our current cyberspace team, there

While there are emerging, emergency, and expeditionary capabilities, many of these options will not fill current perceived voids in our organizations in cyber.

is no robust space and cyber situational awareness capability or collaborative process that allows us to operate transparently in degraded and denied space and cyber environments. Recently, USARPAC has grown to a four star headquarters and has seen rapid development of Pacific roles as the theater joint force land component command and with forces regionally aligned or assigned to USARPAC. USARPAC personnel will continue to try to better equip themselves for other warfighting responsibilities in support of US Pacific Command (USPACOM) by establishing a forward element in direct support of 8th Army and United States Forces Korea missions. Furthermore, the USARPAC "1 Team" will continue to build partnership capacity throughout the region in space, cyberspace, and land component domains.

USARPAC has begun to reorganize for the long-haul mission. Specifically, USARPAC has concentrated its efforts into strategic, operational, and sustaining functions. The recently stood up Strategic Effects Directorate (FXD) is organized with our security cooperation planning team, international military affairs, civil-military operations, public affairs, protocol, inform and influence activities, and strategic capabilities team. The space support element has taken on the broader role of integrating all highly technical effects and capabilities through a Strategic Capabilities Center (SCC), or a space, cyber/CEMA, and technical operations fusion cell. The FXD SCC will synchronize, plan, and coordinate cyber operations, although it is not doctrinally manned to do so. In the ASCC, cyberspace roles have been ill defined, and operations, actions, and activities cannot be resolved by crisis action working groups alone. It is even more of a challenge to operate this way during steady state, phase zero operations. Only recently have we deliberately invested in the oversight of cyber activities among all the G2, G3, and G6 stakeholders; while we still see gaps and seams that have been left unattended among other cyber stakeholders in the Pacific. With the SCC, we will begin to build space and cyber capacity across all the staff elements to filter through all phases of ULO and develop a bridge to the Joint Cyber Center at USPACOM. The draft Land Cyber White Paper states that the Army must adapt, organize, train, and equip to be capable of interacting and shaping the cyber realm and must integrate cyberspace within a combined G2, 3, and 6 team to affect cyberspace across the build, operate, defend, exploit, and attack spectrum.

In the ASCC, cyberspace roles have been ill defined, and operations, actions, and activities cannot be resolved by crisis action working groups alone.

Within the SCC, the Army in the Pacific will provide a steady state and enhanced cyberspace team, with residential capability inside the organization that pursues strategic capabilities and integration across subordinate elements. This SCC is taking on the gaps in cyber and space and will work degraded and denied, and other strategic capabilities integration problem sets. The SCC directs efforts with input from the G2, G3, or G6 with output to the command team.

USARPAC assumes the role of learning, understanding, and fighting in denied and degraded domains by avoiding stovepipe and poorly supported collaborative methods. A SCC addresses these problem sets in developing the short- and long-range goals and plans of the organization. The SCC concept of operations will be reviewed thoroughly while experts are conducting assessments, analysis, and validation in the best interest of the command. This effort will provide more coherent data for making decisions in this challenging environment and these volatile domains. It may take the Army years to develop the appropriate solution. We suggest Army organizations should task internally and do likewise to meet these growing demands and be prepared to fight and operate in degraded and denied space and cyberspace now. We do not need a catastrophic event as an enforcing function. We are in the risk management business; and the consequences and severity of space or cyberspace attacks/terrorism are medium to high and require a properly organized and manned effort.

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ARMY AVIATION TAKES TO THE SEA

A CH-47F Chinook helicopter, flown by pilots from the 25th Combat Aviation Brigade (CAB), races across the Pacific Ocean at Bellows Air Force Station. The helicopter inserted soldiers during a helocast as part of the 25th CAB's Mungadai training 20 Nov 2008. (Photo by SPC Michael Alberts, USA)

By CPT Nathan Herrick, USA

In recent strategic documents, such as the 2010 National Security Strategy and Sustaining US Global Leadership: Priorities for the 21st Century Defense, United States (US) government leadership announced its intentions to expand a commitment to the Asia-Pacific region. Supporting that shift to the Pacific, joint doctrine changed to focus on air-sea operations.

Providing Army support in the US Pacific Command (USPACOM) area of responsibility (AOR) presents a challenge due to its geographical immensity, the change in doctrinal focus, and the fact the region is home to seven of the ten largest armies in the world. While these challenges present an increased necessity for the US Army's presence in the region, the versatility of Army forces, and Army aviation in particular, are limited by range, fuel, and maintenance capabilities. However, the 25th Combat Aviation Brigade (CAB) and its parent unit, the 25th Infantry Division, have a unique geographic location that provides the US the ability to project combat power quickly and efficiently throughout the Pacific.

In Hawaii, the 25th CAB is in proximity to US Navy port facilities and the Mid-Pacific (MIDPAC) Fleet at Joint Base Pearl Harbor-Hickam, which allows the 25th CAB to overcome range, fuel, and maintenance limitations. The US Navy has the ability to operate on the open seas and littorals while retaining the capability to sustain aviation operations and quickly deliver personnel and equipment during contingency operations. Simultaneously, Army aviation provides the US Navy with rotary wing attack, reconnaissance, security, and aerial resupply capabilities.

By harnessing the strengths, capabilities, and expertise of the US Navy and Army aviation into the formation of a maritime task force, we

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The 25th CAB soldiers gained valuable insight and knowledge from conducting their first DLQs with the Navy.

have given strategic level commanders the ability to expand support missions throughout the USPACOM AOR. To build this capability and develop a relationship of trust and understanding, the 25th CAB, in cooperation with US Navy's Surface Group MIDPAC, began deck landing qualifications (DLQ) in the early summer. Senior 25th CAB pilots completed academic and ground school requirements under the tutelage of instructors from the 160th Special Aviation Operations Regiment (SOAR). The CAB pilots then completed five field deck landing patterns on a simulated ship deck at Wheeler Army Airfield, HI, the home base for the 25th CAB.

With the pilots trained and ready to perform deck landings, the US Army and Navy reached a significant milestone when 25th CAB helicopters began conducting DLQs during a Navy exercise for the first time since 2003. Aircrews from 2nd Squadron, 6th Cavalry Regiment, 25th CAB, qualified on the OH-58D Kiowa Warrior while aircrews from the 2nd and 3rd Battalions of the 25th Aviation Regiment, 25th CAB, qualified on the UH-60L Black Hawk. The crews landed aboard the USS Chafee (DDG-90), USS Hopper (DDG-70), and USS Guadalupe (AO-32). In addition, CH-47F Chinook crews with 3-25, 25th CAB, conducted their qualifications on the decommissioned ship, the USS Tarawa (LHA-1).

Senior 25th CAB pilot instructors qualified first by conducting five deck landings which involved safely landing, taking off, flying established traffic patterns, and safely landing again. These landings were performed while the ship pitched and rolled in the open ocean approximately 120 miles from land. The senior instructors then certified other instructors and leaders within the CAB. The 160th SOAR instructor pilots finished their support for the 25th CAB by qualifying several CAB pilots from all airframes under night vision goggle conditions, allowing the CAB to be self-sufficient in training future DLQs. Overall, the 25th CAB certified twenty-six Black Hawk pilots with twenty-three crew chiefs, two Chinook pilots with four crew chiefs, and eighteen Kiowa pilots during the eight-day event.

The 25th CAB soldiers gained valuable insight and knowledge from conducting their first DLQs with the Navy. Leading up to the DLQs, 25th CAB planners participated in a pre-sail conference where it became apparent the US Army and Navy did not have a common understanding of one another's capabilities or share a common operating picture. For example, most crews did not know the difference between a naval support vessel and a US ship which differed in their standard operating procedures (SOPs); tactics, techniques, and procedures (TTP); and terminology.

As the training proceeded, 25th CAB and Navy staff learned the importance of sharing mission capabilities, needs, training requirements, and limiting factors in order to gain a clearer picture of the operation. Additionally, the 25th CAB and Navy refined the pre-sail conference requirements and products. They decided, for example, key planners, liaison officers, and flight leads should attend the conference. Also, the conference is an ideal time to coordinate additional training such as air-to-ground integration for small boat interdiction or vertical resupply.

Another challenge faced was communication system barriers between the Navy and Army. The CAB circumvented this challenge by equipping Army liaison officers with CAB communication equipment and placing them on the vessels. This was valuable for determining information, such as a ship's location, which is classified once it is underway. Getting the ship's projected coordinates to the CAB's flight operation centers with an Army liaison officer onboard simplified communications significantly. Also, we learned the value of integrating the Army liaisons with the Navy so they could remain aboard the vessels throughout the exercise. This is opposed to the liaisons arriving on the first aircraft of the day and departing on the last, which disrupts communications for the first aircraft on each training day.

Obtaining DLQs is only the first step in establishing a joint maritime force able to conduct mission operations throughout the USPACOM AOR. It will be important to define the joint training command relationship between the Army and Navy as the Soldiers and Sailors continue to develop a mutual relationship of trust and understanding of each other's capabilities. The 25th CAB is working to identify ways to task organize and provide the best combat power while continuing to refine SOPs and TTP. Also, specific mission packages based on joint operational requirements need to be further developed.

As we stand now, aviation maritime mission sets include medical evacuation, providing aviation support to retain freedom of navigation in straits, reconnaissance and security operations, small vessel interdiction, and attack of land and sea based targets. Along with these are in-land raid or strike package delivery, maritime vertical envelopment, maritime vertical resupply, search and rescue, and support to humanitarian assistance and disaster relief. While the creation and implementation of a maritime task force is still in the infant stage, cooperation, and joint training exercises between both Services have already begun to build a mutual and dynamic relationship.

The 25th CAB and MIDPAC are planning realistic, demanding, and safe training events that are catalysts for this new relationship. Such events include DLQ sustainment operations, participation in Commander Naval Surface Group MIDPAC's group certification maneuvers, Rim of the Pacific Exercise, and the "Life at Sea" Leadership Development Program. This is where the 25th CAB will host educational seminars to prepare its aviators and leaders for joint task force maritime operations.

While the Pacific region of the world remains a diverse place to operate, establishing a joint maritime task force capitalizes on the abilities of both Services as they face a myriad of diverse tactical and strategic contingencies at sea, in the littorals, and on land.

The 25th CAB is working to identify ways to task organize and provide the best combat power while continuing to refine SOPs and TTP.

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A CH-47D Chinook helicopter, flown by pilots from the 25th Combat Aviation Brigade (CAB), races across the Pacific Ocean at Bellows Air Force Station. The helicopter inserted Soldiers during a helocast as part of the 25th CAB's Mungadai training 20 Nov 2008. (Photo by SPC Michael Alberts, USA)

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AVIATION URBAN OPERATIONS *Multi-Service Tactics, Techniques, and Procedures for Aviation Urban Operations* **Distribution Restricted**	19 APR 13	ATP 3-06.1 MCRP 3-35.3A NTTP 3-01.04 AFTTP 3-2.29	Description: This publication provides MTTP for tactical-level planning and execution of fixed- and rotary-wing aviation urban operations. **Status: Current**
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IADS *Multi-Service Tactics, Techniques, and Procedures for an Integrated Air Defense System* **Distribution Restricted**	1 MAY 09	FM 3-01.15 MCRP 3-25E NTTP 3-01.8 AFTTP 3-2.31	Description: This publication provides joint planners with a consolidated reference on Service air defense systems, processes, and structures to include integration procedures. **Status: Revision**
JFIRE *Multi-Service Procedures for the Joint Application of Firepower* **Distribution Restricted**	30 NOV 12	ATP 3-09.32 MCRP 3-16.6A NTTP 3-09.2 AFTTP 3-2.6	Description: This is a pocket sized guide of procedures for calls for fire, CAS, and naval gunfire. It provides tactics for joint operations between attack helicopters and fixed-wing aircraft performing integrated battlefield operations. **Status: Current**
JSEAD *Multi-Service Tactics, Techniques, and Procedures for the Suppression of Enemy Air Defenses in a Joint Environment* **Classified SECRET**	19 JUL 13	FM 3-01.4 MCRP 3-22.2A NTTP 3-01.42 AFTTP 3-2.28	Description: This publication contributes to Service interoperability by providing the JTF and subordinate commanders, their staffs, and SEAD operators a single reference. **Status: Current**
KILL BOX *Multi-Service Tactics, Techniques, and Procedures for Kill Box Employment* **Distribution Restricted**	4 AUG 09	FM 3-09.34 MCRP 3-25H NTTP 3-09.2.1 AFTTP 3-2.59	Description: This MTTP publication outlines multi-Service kill box planning procedures, coordination requirements, employment methods, and C2 responsibilities. **Status: Revision**
SCAR *Multi-Service Tactics, Techniques, and Procedures for Strike Coordination and Reconnaissance* **Distribution Restricted**	10 JAN 14	ATP 3-60.2 MCRP 3-23C NTTP 3-03.4.3 AFTTP 3-2.72	Description: This publication provides strike coordination and reconnaissance MTTP to the military Services for conducting air interdiction against targets of opportunity. **Status: Current**
SURVIVAL, EVASION, AND RECOVERY *Multi-Service Procedures for Survival, Evasion, and Recovery* **Distribution Restricted**	11 SEP 12	ATP 3-50.3 MCRP 3-02H NTTP 3-50.3 AFTTP 3-2.26	Description: This is a weather-proof, pocket-sized, quick reference guide of basic information to assist Service members in a survival situation regardless of geographic location. **Status: Current**
TAGS *Multi-Service Tactics, Techniques, and Procedures for the Theater Air-Ground System* **Distribution Restricted**	10 APR 07	FM 3-52.2 NTTP 3-56.2 AFTTP 3-2.17	Description: This publication promotes Service awareness regarding the role of airpower in support of the JFC's campaign plan, increases understanding of the air-ground system, and provides planning considerations for conducting air-ground ops. **Status: Revision**
UAS *Multi-Service Tactics, Techniques, and Procedures for Tactical Employment of Unmanned Aircraft Systems* **Distribution Restricted**	21 SEP 11	ATTP 3-04.15 MCRP 3-42.1A NTTP 3-55.14 AFTTP 3-2.64	Description: This publication establishes MTTP for UAS by addressing tactical and operational considerations, system capabilities, payloads, mission planning, logistics, and multi-Service execution. **Status: Revision**

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TITLE	DATE	PUB #	DESCRIPTION/STATUS
ADVISING *Multi-Service Tactics, Techniques, and Procedures for Advising Foreign Forces* **Distribution Restricted**	10 SEP 09	FM 3-07.10 MCRP 3-33.8A NTTP 3-07.5 AFTTP 3-2.76	Description: This publication discusses how advising fits into security assistance/security cooperation and provides definitions for specific terms as well as listing several examples to facilitate the advising process. **Status: Revision**
AIRFIELD OPENING *Multi-Service Tactics, Techniques, and Procedures for Airfield Opening* **Distribution Restricted**	15 MAY 07	FM 3-17.2 NTTP 3-02.18 AFTTP 3-2.68	Description: This publication provides guidance for operational commanders and staffs on opening and transferring an airfield. It contains information on service capabilities, planning considerations, airfield assessment, and establishing operations in all operational environments. **Status: Revision**
CF/SOF *Multi-Service Tactics, Techniques, and Procedures for Conventional Forces and Special Operations Forces Integration and Interoperability* **Distribution Restricted**	17 MAR 10	FM 6-03.05 MCWP 3-36.1 NTTP 3-05.19 AFTTP 3-2.73 USSOCOM Pub 3-33V.3	Description: This is a comprehensive reference for commanders and staffs at the operational and tactical levels with standardized techniques and procedures to assist in planning and executing operations requiring synchronization between CF and SOF occupying the same area of operation. **Status: Revision**
CORDON AND SEARCH *Multi-Service Tactics, Techniques, and Procedures for Cordon and Search Operations* **Distribution Restricted**	10 MAY 13	FM 3-06.20 MCRP 3-31.4B NTTP 3-05.8 AFTTP 3-2.62	Description: This is a comprehensive reference to assist ground commanders, subordinates, and aviation personnel in planning, training, and conducting tactical cordon and search operations. **Status: Current**
EOD *Multi-Service Tactics, Techniques, and Procedures for Explosive Ordnance Disposal in a Joint Environment* **Distribution Restricted**	20 SEP 11	FM 4-30.16 MCRP 3-17.2C NTTP 3-02.5 AFTTP 3-2.32	Description: This publication identifies standard MTTP for planning, integrating, and executing EOD operations in a joint environment. **Status: Revision**
IMSO *Multi-Service Tactics, Techniques, and Procedures for Integrated Money Shaping Operations* **Distribution Restricted**	26 APR 13	ATP 3-07.20 MCRP 3-33.1G NTTP 3-57.4 AFTTP 3-2.80	Description: IMSO describes how to integrate monetary resources with various types of aid within unified action to shape and influence outcomes throughout the range of military operations. **Status: Current**
MILITARY DECEPTION *Multi-Service Tactics, Techniques, and Procedures for Military Deception* **Classified SECRET**	13 DEC 13	MCRP 3-40.4A NTTP 3-58.1 AFTTP 3-2.66	Description: This publication facilitates integrating, synchronizing, planning, and executing MILDEC operations. It is a one-stop reference for service MILDEC planners. **Status: Revision**
Military Diving Operations (MDO) *Multi-Service Service Tactics, Techniques, and Procedures for Military Diving Operations* **Distribution Restricted**	12 JAN 11	ATTP 3-34.84 MCRP 3-35.9A NTTP 3-07.7 AFTTP 3-2.80 CG COMDTINST 3-07.7	Description: This publication is a single source, descriptive reference guide to ensure effective planning and integration of multi-Service diving operations. It provides combatant command, joint force, joint task force, and operational staffs with a comprehensive resource for planning military diving operations, including considerations for each Service's capabilities, limitations, and employment. **Status: Revision**
NLW *Multi-Service Service Tactics, Techniques, and Procedures for the Tactical Employment of Nonlethal Weapons* **Distribution Restricted**	24 OCT 07	FM 3-22.40 MCWP 3-15.8 NTTP 3-07.3.2 AFTTP 3-2.45	Description: This publication provides a single-source, consolidated reference on employing nonlethal weapons. Its intent is to make commanders and subordinates aware of using nonlethal weapons in a range of scenarios including security, stability, crowd control, determination of intent, and situations requiring the use of force just short of lethal. **Status: Revision**
PEACE OPS *Multi-Service Tactics, Techniques, and Procedures for Conducting Peace Operations* **Approved for Public Release**	20 OCT 03 Change 1 incorporated 14 APR 09	FM 3-07.31 MCWP 3-33.8 AFTTP 3-2.40	Description: This publication offers a basic understanding of joint and multinational PO, an overview of the nature and fundamentals of PO, and detailed discussion of selected military tasks associated with PO. **Status: Revision**
TACTICAL CONVOY OPERATIONS *Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations* **Distribution Restricted**	13 JAN 09	FM 4-01.45 MCRP 4-11.3H NTTP 4-01.3 AFTTP 3-2.58	Description: This is a quick-reference guide for convoy commanders operating in support of units tasked with sustainment operations. It includes TTP for troop leading procedures, gun truck employment, IEDs, and battle drills. **Status: Revision**
TECHINT *Multi-Service Tactics, Techniques, and Procedures for Technical Intelligence Operations* **Approved for Public Release**	9 JUN 06	FM 2-22.401 NTTP 2-01.4 AFTTP 3-2.63	Description: This publication characterizes how threat forces maneuver in the operational environment. It presents guidance on evacuating captured material of intelligence value, and provides joint force staffs and other communities of interest with specific data concerning the mission requirements of TECHINT. **Status: Assessment**
UXO *Multi-Service Tactics, Techniques, and Procedures for Unexploded Explosive Ordnance Operations* **Distribution Restricted**	20 SEP 11	ATTP 3-100.38 MCRP 3-17.2B NTTP 3-02.4.1 AFTTP 3-2.12	Description: This publication provides commanders and their units guidelines and strategies for operating with UXO threats while minimizing the impact of the threats on friendly operations. **Status: Revision**

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TITLE	DATE	PUB #	DESCRIPTION/STATUS
AOMSW *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare* **Distribution Restricted**	15 Jan 14	MCRP 3-25J NTTP 3-20.8 AFTTP 3-2.74	Description: This publication consolidates Service doctrine, TTP, and lessons-learned from current operations and exercises to maximize the effectiveness of air attacks on enemy surface vessels. **Status: Current**
BREVITY *Multi-Service Brevity Codes* **Distribution Restricted**	20 SEP 12	ATP 1-02.1 MCRP 3-25B NTTP 6-02.1 AFTTP 3-2.5	Description: This publication defines multi-Service brevity which standardizes air-to-air, air-to-surface, surface-to-air, and surface-to-surface brevity code words in multi-Service operations. **Status: Revision**
COMCAM *Multi-Service Tactics, Techniques, and Procedures for Joint Combat Camera Operations* **Approved for Public Release**	19 APR 13	ATP 3-55.12 MCRP 3-33.7A NTTP 3-61.2 AFTTP 3-2.41	Description: This publication fills the combat camera doctrine void and assists JTF commanders in structuring and employing combat camera assets as effective operational planning tools. **Status: Current**
DEFENSE SUPPORT OF CIVIL AUTHORITIES (DSCA) *Multi-Service Tactics, Techniques, and Procedures for Civil Support Operations* **Distribution Restricted**	11 FEB 13	ATP3-28.1 MCWP 3-36.2 NTTP 3-57.2 AFTTP 3-2.67	Description: DSCA sets forth MTTP at the tactical level to assist the military planner, commander, and individual Service forces in the employment of military resources in response to domestic emergencies in accordance with US law. **Status: Current**
EW REPROGRAMMING *Multi-Service Tactics, Techniques, and Procedures for the Reprogramming of Electronic Warfare and Target Sensing Systems* **Distribution Restricted**	01 FEB 11	FM 3-13.10 (FM 3-51.1) NTTP 3-51.2 AFTTP 3-2.7	Description: This publication describes MTTP for EW reprogramming; the EW reprogramming process, requirements, and procedures for coordinating reprogramming during joint and multi-Service operations, Services' reprogramming processes, organizational points of contact, and reprogramming databases and tools. **Status: Revision**
JATC *Multi-Service Procedures for Joint Air Traffic Control* **Distribution Restricted**	23 JUL 09	FM 3-52.3 MCRP 3-25A NTTP 3-56.3 AFTTP 3-2.23	Description: This is a single source, descriptive reference guide to ensure standard procedures, employment, and Service relationships are used during all phases of ATC operations. It also outlines how to synchronize and integrate JATC capabilities. **Status: Revision**
TACTICAL CHAT *Multi-Service Tactics, Techniques, and Procedures for Internet Tactical Chat in Support of Operations* **Distribution Restricted**	24 JAN 14	ATP 6-02.73 MCRP 3-40.2B NTTP 6-02.8 AFTTP 3-2.77	Description: This publication provides commanders and their units guidelines to facilitate coordinating and integrating tactical chat when conducting multi-Service and joint force operations. **Status: Current**
TACTICAL RADIOS *Multi-Service Communications Procedures for Tactical Radios in a Joint Environment* **Approved for Public Release**	26 Nov 13	FM 6-02.72 MCRP 3-40.3A NTTP 6-02.2 AFTTP 3-2.18	Description: This is a consolidated reference for TTP in employing, configuring, and creating radio nets for voice and data tactical radios. **Status: Current**
UHF SATCOM *Multi-Service Tactics, Techniques, and Procedures Package for Ultra High Frequency Military Satellite Communications* **Distribution Restricted**	9 AUG 13	ATP 6-02.90 MCRP 3-40.3G NTTP 6-02.9 AFTTP 3-2.53	Description: Operations at the JTF level have demonstrated difficulties in managing a limited number of UHF SATCOM frequencies. This publication documents TTP that will improve efficiency at the planner and user levels. **Status: Current**

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There is no better resource for information than our warfighters doing the mission. Personal experiences, studies, and individual research lead to inspirational and educational articles. We, therefore, invite our readers to share their experiences.

We want to take your expertise and lessons learned from recent operations or any other multi-Service or multi-national missions that you have been involved, and spread that knowledge to others. Get published by sharing your experiences and expertise.

The May 2014 ALSB focus is Unmanned Aircraft Systems. This edition will address issues in employing these systems, including flight operations in the national airspace and split based operations.

The September 2014 ALSB topic is Joint Training in a constrained environment. This edition will address current challenges of conducting quality training and leveraging the joint force.

The January 2015 ALSB topic is defense support of civil authorties and inter-agency support. This edition will focus on the issues of integrating military assets for civil authorties and inter-agency operations.

Article Requirements

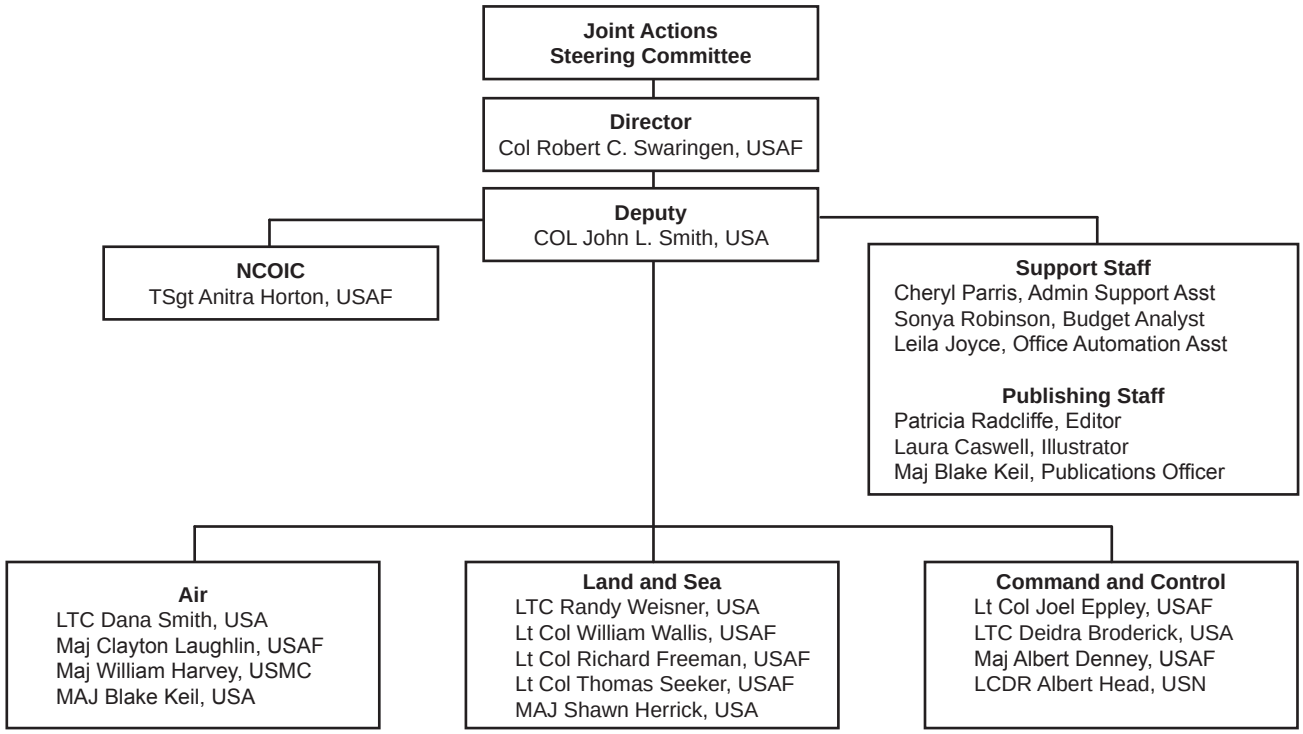
Submissions must:

- Unclassified
- Be 1,500 words or less
- Be publicly releasable
- Be double spaced
- Be in MS Word format
- Include the author's name, unit address, telephone numbers, and email address
- Include current, high-resolution, 300 dpi (minimum), original photographs and graphics. Pub lic affairs offices can be good sources for photographs or graphic support.

Article and photo submission deadlines are below. Early submissions are highly encouraged and appreciated.

Topic	Deadline	Point of Contact
UAS	28 Feb 2014	alsaA@us.af.mil (757) 225-0966
Joint Training	3 Jul 2014	alsaB@us.af.mil (757) 225-0961
DSCA	31 Oct 2014	alsa.team.c@us.af.mil (757) 225-0903

ALSA ORGANIZATION



ALSA JOINT WORKING GROUPS

Date	Publication	Location	Point of Contact
February 2014	ISR Optimization*	Joint Base Langley-Eustis	Air Branch **alsaA@us.af.mil**
February 2014	Operational Assessments*	Joint Base Langley-Eustis (Telecon available)	Land/Sea Branch **alsaB@us.af.mil**
February 2014	UXO	Joint Base Langley-Eustis (DCO and Telecon available)	Land/Sea Branch **alsaB@us.af.mil**
March 2014 (T)	ISR Optimization*	Joint Base Langley-Eustis (DCO and Telecon available)	Air Branch **alsaA@us.af.mil**
March 2014 (T)	UXO	Joint Base Langley-Eustis (Telecon available)	Land/Sea Branch **alsaB@us.af.mil**
April 2014 (T)	ISR Optimization*	Joint Base Langley-Eustis (DCO and Telecon available)	Air Branch **alsaA@us.af.mil**
April 14	Operational Assessments*	Joint Base Langley-Eustis (Telecon available)	Land/Sea Branch **alsaB@us.af.mil**
May 14 (T)	ATCARS	Robins AFB, GA	Air Branch **alsaA@us.af.mil**
May 14 (T)	Dynamic Targeting	Joint Base Langley-Eustis	Air Branch **alsaA@us.af.mil**
June 14 (T)	DSCA	TBD	C2 Branch **alsa.Team.C@us.af.mil**
June 14 (T)	ATCARS	Robins AFB, GA	Air Branch **alsaA@us.af.mil**
October 14 (T)	JFIRE	Nellis AFB, NV (T)	Air Branch **alsaA@us.af.mil**
November 14 (T)	JSEAD	Joint Base Langley-Eustis	Air Branch **alsaA@us.af.mil**

* New ALSA publication in development
(T) - tentative

ALSA's mission is to rapidly and responsively develop multi-Service tactics, techniques and procedures, studies, and other like solutions across the entire military spectrum to meet the immediate needs of the warfighter.

ALSA is a joint organization governed by a Joint Actions Steering Committee chartered by a memorandum of agreement under the authority of the Commanders of the Army Training and Doctrine Command, USMC Combat Development Command, Navy Warfare Development Command, and Headquarters, Curtis E. LeMay Center for Doctrine Development and Education.

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